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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,013	09/22/2003	Stephen Hillenbrand		7947

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EXAMINER

BALSIS, SHAY L

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/666,013

Applicant(s)

HILLENBRAND, STEPHEN

Examiner

Shay L. Balsis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/22/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: figure 1, element 6. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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***Claim Objections***

Claim 1 is objected to because of the following informalities:

Lines 6-7 state "the tip of said wire shaft". There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 5 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 5, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roy (USPN 6122792) in view of Sommerfeld, Sr. (USPN 6827794) and Koregelos (USPN 4144504).

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Roy teaches a cleaning brush comprising an elongated handle (figure 1, element 3), a shaft (figure 1, element 2) attached to the handle and a plurality of bristles (figure 1, element 1) (claim 1). The bristles are radially arranged about the shaft so that the bristles form a brush member having a diameter of  $\frac{3}{4}$ " to 6" (col. 3, lines 18-20) (claim 1) and a length of 6 inches (col. 3, lines 11-14). The shaft is has a length of 3' to 15' (col. 4, lines 14-16) and a diameter of  $\frac{1}{8}$ " to 3" (col. 5, lines 30-32) (claim 1). The shaft is flexible so that it can be bent to accommodate twists and turns in the vent, hose or tube it is used to clean (col. 2, lines 64-67) (claim 2). The shaft could be bent in half for storage (claim 3). The handle is made from wood, plastic, rubber or metal (col. 5, lines 39-40) (claim 4). Roy teaches all the essential elements of the claimed invention however fails to teach that the brush member is four inches long. Roy teaches that the brush member is about 6 inches long, however the brush member could be made to a variety of lengths to accommodate uses in different applications (col. 3, lines 5-18). Roy does not state the exact diameter of the bristles however states that the bristles may come in a variety of lengths and thickness, depending on the amount and type of cleaning required (col. 3, lines 5-18). Roy also fails to teach that the shaft comprises a pair of metal twisted wires. Additionally, Roy fails to teach an end cap to cover the top of the wire shaft. Further Roy fails to teach that the bristles of the brush member have a diameter of approximately thirty two thousandths of an inch and that the bristles are spaced so that there is approximately one hundred and twenty bristles per linear inch (claim 1).

Sommerfeld teaches an air gap cleaner comprising an elongated shaft made from twisted metal wires (figure 7, element 7). There is a plurality of bristles intertwined within the twisted wire shaft to form a brush member (figure 7, element 30). Sommerfeld does not teach an end

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cap covering the tip of the wire shaft or that exact dimensions of the brush member and its bristles.

Koregelos teaches a brush member comprising a twisted wire shaft (figure 1, elements 8 and 9). The bristles are intertwined within the shaft (figure 1, element 10). The shaft further comprises an end cap (figure 1, element 16) to avoid scratching and abrasion from occurring along the inside of the area being cleaned. Koregelos fails to teach the dimensions of the brush member and its bristles.

Since Roy teaches that the brush member and the bristles will vary based on the amount and type of cleaning required, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Roy to have a four inch long brush member, have a bristle diameter of thirty two thousandth of an inch and have the bristle spacing be approximately one hundred and twenty bristles per linear inch. These are obvious modifications to be made to the cleaning device because Applicant has not disclosed that brush member length or the bristle diameter and spacing provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the brush member length, bristle diameter and bristle spacing as taught by Roy or the claimed brush member length of four inches, bristle diameter of thirty two thousandths of an inch and bristle spacing of one hundred and twenty per linear inch because they all perform the same function of cleaning a duct, tube, hose, etc. equally well. Therefore, it would have been obvious to one of ordinary skill in the art to modify Roy to obtain the invention as specified in claim 1.

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Additionally, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the shaft be made from a twisted wire material, as taught by Sommerfeld because they are equivalent structures known in the art. Roy teaches that his shaft is made from a flexible material so as to adjust to be able to twist and turn. The flexible material used in Roy's invention could be plastic, wood, rubber or a metal (semi-rigid woven cable) material (col. 5, lines 19-25). Therefore, because Roy and Sommerfeld both teach flexible shafts that could be made from metal, they were art-recognized equivalents at the time of the invention was made and one of ordinary skill in the art would have found it obvious to substitute Sommerfeld's twisted metal wire shaft for Roy's shaft. With that modification, it would have been obvious to modify the invention so that an end cap would be provided on the tip of the wire shaft as taught by Koregelos, in order to prevent scratching and abrasion from occurring along the inside of the device being cleaned (col. 3, lines 5-8).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roy (USPN 6122792) in view of Sommerfeld, Sr. (USPN 6827794) and Koregelos (USPN 4144504), as applied to claims 1-4 above and further in view of Berger et al. (USPN 5560069).

Roy in view of Sommerfeld, Sr. and Koregelos teach all the essential elements of the claimed invention however fail to teach an aperture located in the handle portion of the cleaning device. Berger teaches a lint brush for a dryer duct comprising an aperture (figure 2, element 32) located in the handle portion. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Roy in view of Sommerfeld, Sr. and Koregelos to include an aperture in the handle as taught by Berger, so that the cleaning device can be hung up and stored out of the way when not in use (col. 4, lines 38-41).

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L. Balsis whose telephone number is 571-272-1268. The examiner can normally be reached on 7:30-5:00 M-Th, alternating F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on 571-272-1142. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Slb  
5/13/05

  
**JOHN KIM**  
**SUPERVISORY PATENT EXAMINER**